Izvestiya, Physics of the Solid Earth 2017 vol.53 N1, pages 162-172

Test determinations of paleointensity in historical lavas of Kamchatka

Zhidkov G., Shcherbakov V., Dolotov A., Smirnov M., Ovsyannikov A., Plechov P.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© 2017, Pleiades Publishing, Ltd.The reliability of the Thellier method for determining the paleointensity of a geomagnetic field is explored on recent igneous rocks of Kamchatka. The main magnetic mineral in the studied rocks is titanomagnetite with different degree of oxidation. It is obtained that the reliability of the results can be assessed based on the deviations of the check points of the partial thermoremanent magnetization (pTRM) during the Thellier experiment. Besides, for different rocks, it is found that the stability of titanomagnetites to heating during the experiments can be insufficient for validating the reliability of the results of paleointensity determination; however, at the same time, the reliability may depend on the initial (oxidation) state of the magnetic minerals of the studied rocks.

http://dx.doi.org/10.1134/S1069351316060136

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